# Syllabus

## Course description

<table>
<thead>
<tr>
<th>Course title</th>
<th>Econometrics for Finance</th>
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<tbody>
<tr>
<td>Course code</td>
<td>27348</td>
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<tr>
<td>Scientific sector</td>
<td>SECS-P/05</td>
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<tr>
<td>Degree</td>
<td>Bachelor in Economics and Management</td>
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<tr>
<td>Semester and academic year</td>
<td>2nd semester 2021/2022</td>
</tr>
<tr>
<td>Year</td>
<td>3</td>
</tr>
<tr>
<td>Credits</td>
<td>7</td>
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<tr>
<td>Modular</td>
<td>No</td>
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- **Total lecturing hours**: 36
- **Total lab hours**: -
- **Total exercise hours**: -
- **Attendance**: Suggested, but not required
- **Prerequisites**: Attendance of “Statistics”, “Mathematics for Economics” (A and B), and “Financial Analysis” is suggested in order to properly follow these lectures.
- **Course page**: [https://www.unibz.it/it/faculties/economics-management/bachelor-economics-management/](https://www.unibz.it/it/faculties/economics-management/bachelor-economics-management/)

## Specific educational objectives

The course refers to the complementary educational activities and belongs to the scientific area of Economics.

The course covers the essential tools of econometrics before moving to financial econometrics and empirical finance. It provides a review of the classical linear regression model and focuses on its estimation and interpretation. Financial assets, prices, returns and volatility are subsequently considered and modelled.

Specific educational objectives include:
- Ability to interpret econometric results and draw appropriate conclusions.
- Ability to apply theoretical and empirical models to real world problems.
- Learn specialised statistical/econometric software to perform econometric analysis.
- Ability to efficiently plan and manage independently economic and financial studies.
- Enhance organisational, analytical and communication skills through participation in group project work.

<table>
<thead>
<tr>
<th>Lecturers</th>
<th>Eduardo Rossi</th>
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<tbody>
<tr>
<td></td>
<td>Office:</td>
</tr>
<tr>
<td></td>
<td>e-mail: <a href="mailto:edrossi@unibz.it">edrossi@unibz.it</a></td>
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Scientific sector of the lecturer | SECS-P/05
---|---
Teaching language | English
Office hours | 21 hours
Cockpit – students’ zone – individual timetable
Webpage: [https://www.unibz.it/timetable/?sourceId=unibz&department=26&degree=13140%2C13181](https://www.unibz.it/timetable/?sourceId=unibz&department=26&degree=13140%2C13181)

Lecturing assistant | TBD
Teaching assistant | TBD
Office hours | none

List of topics covered
- Review of matrix algebra and basic statistics, Linear Regression with a Single Regressor and with Multiple Regressors, Hypothesis Tests and Confidence Intervals in Linear Regression Models.
- Capital Asset Pricing Model. Regression diagnostics.
- Models and methods for predicting future returns (by Classical Linear Regression and ARMA models): specification, inference and forecasting.
- Models for volatility analysis and prediction (ARCH and GARCH models): specification, inference and forecasting.

Teaching format | Frontal lectures

Learning outcomes

**Knowledge and understanding**
The aim of the course is to equip students with a working knowledge of important econometric techniques used in international finance and financial economics. Students should be able to correctly specify, estimate and test the econometric models and to interpret properly results from the undertaken analyses.

**Applying knowledge and understanding**
Ability to perform econometric analysis. Students know how to use essential tools for working with economic and financial data. Ability to perform all the mentioned econometric techniques by using appropriate software.

**Making judgments**
Ability to formulate models and to implement appropriate econometric tools for the of financial data.

**Communication skills**
Ability to present in a consistent and precise manner the results obtained from the econometric analysis.

**Learning skills**
Ability to understand and analyze financial data from a quantitative perspective.

Assessment
*The final exam consists of a project to be carried out in groups of 2 students, leading to a written report and its*
The assessment of the knowledge of the theory will take place during the presentation.

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<th>Assessment language</th>
<th>English</th>
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<tr>
<td>Evaluation criteria and criteria for awarding marks</td>
<td>Final grade is determined by the empirical project, its presentation and the knowledge of theory. The purpose of the exam is to ascertain that students acquire the knowledge required to correctly use the econometric tools discussed during the lectures and possess the ability to properly interpret the results provided by these procedures. The assignment also tests students’ ability to - work in team - collect and process data - make critical comparisons and judgements - undertake effective quantitative problem-solving - deliver technical presentations.</td>
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<tr>
<td>Supplementary readings</td>
<td>Further references will be given in class</td>
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